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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,478	10/03/2005	Bengt Sahlgren	0104-0500PUS1	5522

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EXAMINER	
RADKOWSKI, PETER	

ART UNIT	PAPER NUMBER
2883	

NOTIFICATION DATE	DELIVERY MODE
03/25/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/520,478	SAHLGREN ET AL.	
	Examiner	Art Unit	
	PETER RADKOWSKI	2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 January 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/7/2005 and 3/16/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Office Action

Claim Rejections - Nonstatutory Obvious-Type Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1

2. Claim 1 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claim 1 of Henriksson (7,295,732). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed spectrally selective optical switch of Claim1 of the instant application and the claimed selective optical coupling device of Claim 1 of Henriksson share the following limitations: first and second optical waveguides, resonator members, deflector members.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-6 and 9

4. **Claims 1-6 and 9 are rejected under 35 U.S.C. 103(a)** as being obvious over Fan et al. 6,101,300) in view of Asseh et al. (7,139,485).

From hereinafter, Fan will stand-in for Fan et al. and Asseh will stand-in for Asseh et al.

Regarding Claims 1-6 and 9, Fan teaches spectrally selective optical switch [10], comprising first and second optical waveguide fibers, [12] and [14], of adjacent and parrel light paths coupled by an external resonator system [16] which provides for tunable/variable, including a 50-50 split-exchange, coupling of light between the light-guiding cores of the two waveguides by exploiting resonant conditions predictably determined by the opposed mirrors of the resonator system. (See Fan, fig. 1, and col. 5, ll. 15-21). **Further regarding Claims 1-6 and 9**, Fan does not explicitly teach a tunable tilted external resonator with mirrors being a blazed Bragg grating or a multilayer dielectric mirror. However, Asseh teaches a tunable optical switch comprising external resonator [6], tilted blazed Bragg grating [9] and dielectric multi-layer mirror [7] (See Aseh, figs. 4, 10 and 12; and col. 6, ll. 43-47; col. 12, ll. 32-47; col. 13, ll. 1-10). Since Fan and Asseh both teach optical coupling devices, it would have been obvious to one of ordinary skill in the art to modify Fan to have the resonator configuration taught by Asseh because the resultant configuration would be able to couple selective wavelengths without significantly affecting other wavelengths. (See Asseh, col 13, ll. 11-15) One would have been

motivated to make this modification because wavelength selective coupling improves the signal carrying capability of optical networks.

Claims 1 and 7

5. **Claims 1 and 7 are rejected under 35 U.S.C. 103(a)** as being obvious over Fan et al. 6,101,300) in view of Asseh et al. (7,139,485) and further in view of Waarts et al. (6,212,310).

From hereinafter, Waarts will stand-in for Waarts et al.

Regarding Claim 1, Fan in view of Asseh teaches a tunable, spectrally selective optical switch comprising two coupled waveguides. (See above.)

Regarding Claim 7, Fan in view of Asseh does not explicitly teach a dual-core fiber comprising the two waveguides. However, Waarts teaches an optical resonator device [45] comprising a fiber with dual cores [51] and [52]. (See Waarts, fig. 15, and col. 5, ll. 29-37) Since Fan, Asseh and Waarts all teach two waveguide resonator systems, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fan in view of Asseh to have the dual core configuration taught by Waarts because the resultant configuration would exhibit improved optical power efficiency. (See Waarts, col. 41-43) One would have been motivated to make this modification because improving power efficiency of optical switches would improve the quality of the signal carried by optical networks.

Claims 1 and 8

6. **Claims 1 and 8 are rejected under 35 U.S.C. 103(a)** as being obvious over Fan et al. 6,101,300) in view of Asseh et al. (7,139,485) and further in view of Farries (5,778,119).

Regarding Claim 1, Fan in view of Asseh teaches a tunable, spectrally selective optical switch comprising two coupled waveguides. (See above.)

Regarding Claim 8, Fan in view of Asseh does not explicitly teach a matrix switch device. However, Farries teaches a coupling device with a plurality of switches [100]. (See Farries, figs. 1 and 4; and Abstract) Since Fan, Asseh, and Farries all teach waveguide coupling devices, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fan in view of Asseh to have the matrix configuration taught by Farries because the resultant configuration would be able to selectively switch combined optical signals. (See Farries, col. 5, ll. 14-17) One would have been motivated to make this modification because selectively coupling combined optical signals would enhance the signal carrying capacity of optical networks.

Conclusion

7. The prior art made of record in Form 892 and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Radkowski whose telephone number is (571) 270-1613. The examiner can normally be reached on Monday - Thursday, 8 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font, can be reached on (517) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, See http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call (800) 786-9199 (IN USA OR CANADA) or (571) 272-1000.

/Peter P. Radkowski/ 3/14/2008 /James P. Hughes/

Examiner, Art Unit 2883